Gives the details of further experiments comparing evaporation from water in dishes of different sizes. Repeats the table given in Lamont, 1868. Advises experiments to compare evaporation in different exposures. Suggests the use of the atmometer as a psychrometer, as it determines the average humidity for any given period, an advantage over the usual method which only determines it for momentary periods.

Marié-Davy, H.
Atmidomètre à vase poreux de Babinet. Nouv. mét., 1869, **2**:253-4.

This atmometer consists of a porous vessel, similar to those used in ordinary electric batteries, closed by a stopper bearing a glass tube of small bore which leads to a copper cylinder, furnished laterally with a vertical glass tube graduated in millimeters. The porous vessel is filled with water and remains filled by capillarity, in spite of the evaporation which operates at its surface, and although the level of the water in the reservoir is lower than the evaporating surface. The section of the supply reservoir is only 0.0379 of the evaporating surface; this ratio can be varied at will. An extreme sensibility is claimed for this instrument, together with the possibility of following from hour to hour the progress of evaporation, and of obtaining at a given hour and day the effect upon it of temperature, the state of the sky, the movement and humidity of the air, etc. It is regarded as an apparatus suitable for experimentation rather than an instrument able to remain for a long time comparable to itself. Unless it is supplied with distilled water, calcareous salts dissolved in the water gradually incrust the pores and destroy the permeability of the clay, which may be restored by washing with a very weak solution of acetic acid. Gives a table showing the hourly rate for July 7-8. When the pores are free evaporation from this surface is found to be almost as rapid as that from a free water surface, taking into account the temperature of the evaporating water. Evaporation is proportional to the difference between the actual tension of water vapor in the air, and the vapor tension of saturated air at the temperature of the evaporating surface. The temperature of the porous surface is lower than that of the surface of freely exposed water, because in the latter case the evaporating surface is warmed by diffusion from the main body of water, while in the former diffusion is very slow. In one afternoon the porous vessel evaporated 1.584 mm. at a mean temperature of 27.6° C., while an ordinary atmometer lost 2.844 mm. at a mean temperature of 33.5° C.

Risler, Eugène.
Sur l'évaporation du sol. Arch. sci. phys. et nat., 1869, **36**:27-33. Also summarized in Proc. inst. civ. engin., 1876, **45**:56.

Experiments were made at Calève, near Nyon, Switzerland, with drain gages 1.2 meters deep containing a compact and impervious subsoil. The average annual rainfall, 1867-8, was 41 inches, 70 per cent of which evaporated, and 30 per cent percolated into the ground.

Symons, G. J. and Rogers Field.
See Rogers Field.

Symons, G. J.
Evaporation. Brit. Rainf., 1869, (—).

Tables compare results of evaporation observations with various atmometers, which are described. They generally consisted of vessels, more or less protected from overheating, for determining the amount lost from a free water surface. Those of Beverly, Buist, Casella, Dalton, Dines, Greaves, Howard, J. F. Miller, S. H. Miller, Mitchell (bird-fountain device), Proctor, Sharple, Steinmetz, are of this form.

1870.

Ansted, D. T.
Physical Geography. 1870. 4th ed. p. 285-6. Abstract in Ramsay, 1884.

Refers to the enormous force consumed in the evaporation of water from the ocean. Estimates total annual rainfall of the earth at not less than 200 millions of millions of tons. Assuming the evaporation to be equal to the rainfall, an average of about 7,000 pounds of water evaporate every minute from each square mile of ocean surface. "The conversion of this into vapor, conveyance thru the air, and recondensation means a force equivalent to the lifting of very much more than 1,500,000 millions of millions of pounds of water one foot high per minute of time during the whole period." This does not include the large evaporation from the land surfaces of the earth.

Dines, George.
Evaporation. Symons's met. mag., 1870, **5**:70-2. Review in Brit. rainf., 1889, (—): 24-5.

Compares the rates of evaporation from five evaporators of different sizes, the largest 1½ feet in diameter, and finds the largest lost less than ¾ of the amount lost by the smallest. The temperature of the water in the largest evaporator varied from 32° to 77° in April, while the river temperatures varied from 39° to 60.3°; in June the temperature of the former varied from 33° to 84°, but the river varied only from 46° to 66.8°. The influence of temperature upon the rate of evaporation is shown by the following observation: "In a room of which the temperature was 62°, water of that temperature evaporated at the rate of 0.003 inches per hour (about 26 inches in a year), and water at 88° evaporated at the rate of 0.015 inches per hour (about 131 inches per year)."

Dines, G[eorge].
On evaporation and evaporation gages, with some remarks on the formation of dew. (1870.) Short abstract and note in Nature, 1870, **3**:79; Proc. Brit. met. soc., 1871, **5**:199-213.

Experiments in evaporation from water at temperatures below 176° F. showed that evaporation goes on until the temperature of the water, falling lower than that of the air, approaches the dew-point; that condensation occurs at temperatures of 32° and higher until the dew-point is again approached. The dew-point thus indicates very closely the line of demarcation between evaporation and condensation. Dalton's formula, $Dx=E$ (where D is the vapor pressure in inches of mercury at the temperature of the water minus that at the dew-point, and x is a constant determined by experiment), is considered approximately correct when water temperature and dew-point are far apart, but uncertain when these temperatures closely approach each other. Experiments showing the influence of heat are described, together with others in which the depth of the water below the edge of the vessel exerted considerable influence on the amount of evaporation. Evaporation from sea water amounted to 4¼ per cent less than that from rain water, and this difference increased with increasing concentration.

Dufour, Louis.
Observations siccimétriques à Lausanne. Bul. soc. vaud. sci. nat., 1870, **10**:555-6. Also Les mondes, 1873, **31**:570-2. Also Bul. int. obs. Paris, June 17-18, 1873; Mar. 26-27, 1875. Also conclusions in Arch. sci. phys. et nat., 1870, **37**:245; 1875, **52**:241-3; 1875, **53**: 129-31.

The siccimeter described in Dufour, 1869, showed almost equal rainfall (855 millimeters) and evaporation (860 millimeters) in 1869.

[*To be continued.*]

CORRIGENDA.

In MONTHLY WEATHER REVIEW for March, 1908, Vol. XXXVI, p. 53, column 1, line 25, for "drained" read "dredged."

In MONTHLY WEATHER REVIEW for April, 1908, Vol. XXXVI, p. 109, the equations (17), (18), (19), and (20) should read as follows:

$$F_0'=Q_0\left[(0.061-0.008\delta)+0.0012E_0m\right] \qquad (17)$$

$$Q_m=Q_0\left(\frac{0.93^{m\delta}}{1+0.18m\delta^{1/2}}-\left[(0.061-0.008\delta)+0.0012E_0m\right]\right) \qquad (18)$$

$$\frac{Q_{m+1}}{Q_m}=\frac{\dfrac{0.93^{\delta(m+1)}}{1+0.18(m+1)\delta^{1/2}}-\left[(0.061-0.008\delta)+0.0012E_0(m+1)\right]}{\dfrac{0.93^{m\delta}}{1+0.18m\delta^{1/2}}-\left[(0.061-0.008\delta)+0.0012E_0m\right]} \qquad (19)$$

$$Q_0=\frac{Q_m}{\dfrac{0.93^{m\delta}}{1+0.18m\delta^{1/2}}-\left[(0.061-0.008\delta)+0.0012E_0m\right]} \qquad (20)$$

In MONTHLY WEATHER REVIEW, for June, 1908, Vol. XXXVI, p. 177, Table 1, column headed "No. days and mo. in which temperature fell to zero," make it read "fell *below* zero."

In MONTHLY WEATHER REVIEW for August, 1908, at bottom of page 239 and top of page 240, the headings to tables should read "Dates of opening and closing of navigation at the more important ports on Lake Superior." On page 241, top of page, omit "continued" from table heading.

For August, 1908, page 249, column 2, line 2, for "Table 49" read "Table 50." Page 235, column 2, line 21 from the bottom should read "the rise usually comes earlier, . . ."

In MONTHLY WEATHER REVIEW for September, 1908, page 285, column 2, line 18, for "the sum of all the radiation" read "the sum of all the diffusely reflected radiation." Page 285, column 2, line 20, insert "radiation" at the end of the line, to read "the total amount of solar radiation which falls on *a*." Page 286, column 1, line 21, the expression

$$\frac{1}{0.994\left[\varphi(Z)+\varphi(i)\right]} \text{ should read } \frac{1}{0.994^{\left[\phi(Z)+\phi(i)\right]}}.$$

Page 299, columns 1 and 2, and page 300, column 2, for "Hellman" read "Hellmann." Page 306, column 2, last line, insert (to be continued).